

IN THE CLAIMS:

Please amend the claims as indicated below, without prejudice:

1. (Previously presented) A spinal fixation device comprising:

an elongate support member;

a connecting member having a female-tapered first through-passage formed therein and a concave sidewall defining an aperture for receiving the elongate support member therein, said connecting member having internal sidewalls defining said female-tapered first through-passage; and

a fastening member configured and dimensioned to penetrate and attach to a bone, said fastening member having a male-tapered external portion configured and dimensioned to matingly engage with the sidewalls defining the female-tapered first through-passage of the connecting member in a tapered locking fit to thereby lock said connecting member in position relative to the bone when said fastening member is attached to the bone;

wherein the elongate support member is secured to the connecting member by a clamping force provided at least in part by the fastening member.

2. (Original) The spinal fixation device of claim 1, said connecting member further comprising a second through-passage defined by a sidewall, wherein the female tapered first through-

passage tapers outwardly in a proximal-to-distal direction, and the sidewall of the second through-passages comprises threads.

3. (Previously presented) The spinal fixation device of claim 1, wherein the male-tapered portion has a first end and a second end and is longer than the female-tapered first through-passages such that the second end of the male-tapered portion extends beyond said female-tapered first through-passages when said male-tapered portion is matingly engaged with the sidewalls defining the first through-passages in the tapered locking fit.

4. (Original) The spinal fixation device of claim 1, wherein the device further comprises a set screw and a screw driver, the screw driver being configured and dimensioned to accommodate and tighten both the fastening member and the set screw.

5. (Original) The spinal fixation device of claim 4, the set screw having an external hexagonal head portion, and the fastening member having a mid-collar, the mid-collar forming a hexagon that is substantially equivalent in size to said hexagonal head portion of said set screw.

6. (Previously presented) The spinal fixation device of claim 1, wherein the elongate support member has a bend formed therein

such that said elongate support member has a first, longer portion and a second, shorter portion.

7. (Previously presented) The spinal fixation device of claim 6, wherein the connecting member further comprises a gripping member that includes the concave sidewall defining the aperture that is formed therethrough allowing the elongate support member to pass therethrough, wherein the gripping member grips said elongate support member and thereby locks said elongate support member in a location relative to the bone when said connecting member is in a clamped position.

8. (Original) The spinal fixation device of claim 7, wherein the device further comprises a stem member with a stem portion extending laterally therefrom, the stem member further having a concave sidewall defining a lateral through-passage for contactibly engaging the elongate support member, said stem member being freely rotatable along an axis of said elongate support member prior to being clamped to said elongate support member, wherein the connecting member may be selectively attached to said stem portion allowing the fastening member to be inserted polyaxially into the bone.

9. (Original) The spinal fixation device of claim 1, wherein the connecting member further comprises an upper portion and a lower portion, said upper and lower portions each defining an axis, wherein an angle is formed between the upper axis and the lower axis when the connecting member is in its natural state and no external forces are applied, said angle being greater than zero degrees.

10. (Original) The spinal fixation device of claim 9, the connecting member further having an unlocked position and a locked position, wherein the connecting member remains in the unlocked position and has a limited degree of resiliency in maintaining its original shape to thereby enable the upper portion of said connecting member to be compressed toward the lower portion of said connecting member and into the locked position.

11. (Original) The spinal fixation device of claim 1, the male-tapered external portion of the fastening member having a female-threaded recess formed therein, said fastening member having sidewalls defining said recess, said male-tapered external portion being configured and dimensioned to mate with the sidewalls defining the first through-passage in frictional engagement therewith.

12. (Previously presented) The spinal fixation device of claim 11, the device further comprising a fastener, the connecting member further comprising a second through-passage formed therein, wherein the connecting member being in a locked position allows the fastener to be inserted through the second through-passage of the connecting member and into the first through-passage of the connecting member to thereby threadedly engage the sidewalls defining the female-threaded recess of the fastening member and thereby hold said connecting member in a compression locked position upon the elongate support member.

13. (Original) The spinal fixation device of claim 1, the fastening member further comprising a first side and a second side with a mid collar separating the first side from the second side, the second side being threaded for attaching the fastening member to the bone.

14. (Original) The spinal fixation device of claim 13, wherein the length of the second side of the fastening member being at least three times the length of the first side.

15. (Previously presented) The spinal fixation device of claim 1, wherein the elongate support member has a right-angle bend formed therein such that said support member assumes an "L" shape

having a first, longer portion and a second, shorter portion extending at a substantially right angle with respect to said longer portion.

16. (Original) The spinal fixation device of claim 1, the device having a disengaging means for disengaging and releasing the tapered lock fit to thereby cause the release of said male-tapered external portion from said female-tapered first through-passage of the connecting member.

17. (Original) The spinal fixation device of claim 8, the device having an aligning means for aligning the fastening member and the stem portion to thereby cause said fastening member to be positioned in a substantially orthogonal position with respect to said stem portion when said fastening member is attached to the bone.

18. (Original) The spinal fixation device of claim 9, the lower portion being configured and dimensioned such that said lower portion is at least twice the thickness of the upper portion.

19. (Previously presented) The spinal fixation device of claim 1, the device further comprising a stem member having a stem portion, the elongate support member and the stem portion having

equal diameters such that one connecting member may be selectively attached to either of said elongate support member or said stem portion.

20. (Withdrawn) The spinal fixation device of claim 1, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head portion.

21. (Withdrawn) The spinal fixation device of claim 20, wherein the first head portion may be configured as a cylindrical portion and formed on top of the second head portion, and wherein the second head portion may be configured as a tapered portion.

22. (Withdrawn) The spinal fixation device of claim 21, wherein the first head portion has a recess formed therein.

23. (Withdrawn) The spinal fixation device of claim 20, wherein the first head portion may be configured as a tapered portion and formed on top of the second head portion, and wherein the second head portion may be configured as a cylindrical portion.

24. (Withdrawn) The spinal fixation device of claim 23, wherein the first head portion has a recess formed therein.

25. (Withdrawn) The spinal fixation device of claim 1, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head portion, both the first head portion and the second head portion being tapered.

26. (Withdrawn) The spinal fixation device of claim 1, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head portion, both the first head portion and the second head portion being substantially cylindrical.

27 - 143. (Canceled)

144. (Original) A spinal fixation device comprising:

a connecting member having a female-tapered first through-passage formed therein, said connecting member further having internal sidewalls defining said first through-passage, said first through-passage tapering outwardly in a proximal-to-distal direction, said connecting member further comprising a second through-passage formed therein, the first through-passage and the second through-passage being configured and dimensioned to define a first axis and a second axis, respectively, wherein said first



and second axes are not co-linear, and together cooperatively form an angle greater than zero degrees; and

a fastening member configured and dimensioned to penetrate a pedicle, said fastening member having a male-tapered external portion that tapers outwardly in a proximal-to-distal direction, said male-tapered external portion having a female-threaded recess formed therein and being configured and dimensioned to mate with the sidewalls defining the first through-passage in frictional engagement therewith;

wherein the female-threaded recess is disposed in alignment with the second through-passage of the connecting member when the male-tapered external portion of the fastening member is disposed in engagement with the first through-passage of the connecting member, to thereby enable a fastener to pass through said second through-passage and into said female-threaded recess.

145. (Original) The spinal fixation device of claim 144, wherein the male-tapered portion has a first end a second end and is longer than the female-tapered first through-passage such that the second end of the male-tapered portion extends beyond said female-tapered first through-passage when said male-tapered portion is matingly engaged with the sidewalls defining the first through-passage in frictional engagement.

146. (Original) The spinal fixation device of claim 144, wherein the device further comprises an elongate support member, said support member having a bend formed therein such that said elongate support member has a first, longer portion and a second, shorter portion.

147. (Original) The spinal fixation device of claim 146, wherein the connecting member further comprises a gripping member having a concave sidewall defining an aperture formed therethrough allowing the elongate support member to pass through said aperture, wherein said gripping member grips said elongate support member and thereby locks said elongate support member in a location relative to the bone when said connecting member is in a clamped position.

148. (Original) The spinal fixation device of claim 144, the fastening member further comprises a first side and a second side with a mid collar separating the first side from the second side, the second side being threaded for attaching the fastening member to the bone.

149. (Original) The spinal fixation device of claim 144, wherein the connecting member further comprises a lower portion and an upper portion, the lower portion being configured and

dimensioned such that said lower portion is at least twice the size of the upper portion.

150. (Original) The spinal fixation device of claim 144, the device further comprises an elongate support member and a stem member having a stem portion, the elongate support member and the stem portion having equal diameters such that one connecting member may be selectively attached to either said elongate support member or said stem portion.

151. (Original) The spinal fixation device of claim 144, the device having a disengaging means for disengaging and releasing the frictional engagement to thereby cause the release of said male-tapered external portion from said female-tapered first through-passage of the connecting member.

152. (Original) The spinal fixation device of claim 144, the device having a stem portion and an aligning means for aligning the fastening member and the stem portion to thereby cause said fastening member to be positioned in a substantially orthogonal position with respect to said stem portion when said fastening member is attached to the bone.

153. (Withdrawn) The spinal fixation device of claim 144, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head portion.

154. (Withdrawn) The spinal fixation device of claim 153, wherein the first head portion may be configured as a cylindrical portion and formed on top of the second head portion, and wherein the second head portion may be configured as a tapered portion.

155. (Withdrawn) The spinal fixation device of claim 154, wherein the first head portion has a recess formed therein.

156. (Withdrawn) The spinal fixation device of claim 153, wherein the first head portion may be configured as a tapered portion and formed on top of the second head portion, and wherein the second head portion may be configured as a cylindrical portion.

157. (Withdrawn) The spinal fixation device of claim 156, wherein the first head portion has a recess formed therein.

158. (Withdrawn) The spinal fixation device of claim 144, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head

portion, both the first head portion and the second head portion being tapered.

159. (Withdrawn) The spinal fixation device of claim 144, wherein the fastening member further comprises a head, said head being formed collectively of a first head portion and a second head portion, both the first head portion and the second head portion being substantially cylindrical.

160 - 191. (Canceled)

192. (Previously presented) The spinal fixation device of claim 1, wherein the device further comprises a stem member having a stem portion, and a fastener having a threaded portion;

wherein the elongate support member has a bend formed therein such that said elongate support member has a first, longer portion and a second, shorter portion;

wherein the male-tapered portion of the fastening member has a first end a second end and is longer than the female-tapered first through-passage such that the second end of the male-tapered portion extends beyond said female-tapered first through-passage when said male-tapered portion is matingly engaged with the sidewalls defining the first through-passage in frictional engagement;

wherein the connecting member further comprises a gripping member having a concave sidewall defining an aperture formed therethrough allowing the elongate support member to pass through said aperture, wherein said gripping member grips said elongate support member and thereby locks said elongate support member in a location relative to the bone when said connecting member is in a clamped position;

wherein the elongate support member has a right-angle bend formed therein such that said support member assumes an "L" shape forming the first, longer portion and the second, shorter portion extending at a substantially right angle with respect to said longer portion;

wherein the first end and the second end of the fastening member are separated by a mid collar, the second end being threaded for advancing the fastening member into the bone;

wherein the connecting member further comprises a lower portion and an upper portion, the lower portion comprising the female-tapered first through-passage, and the upper portion having a second through-passage formed therethrough;

wherein the upper and lower portions each define an axis, wherein an angle is formed between the upper axis and the lower axis when the connecting member is in its natural state with no external forces being applied, said angle being greater than zero degrees;

wherein the lower portion is configured and dimensioned such that said lower portion is at least twice the size of the upper portion;

wherein the elongate support member and the stem portion have equal diameters such that a single connecting member may be selectively attached to either said elongate support member or said stem portion;

wherein the device further comprises a disengaging means for disengaging and releasing the frictional engagement between the fastening member and the connecting member to thereby cause the release of said male external taper from said female internal taper of the first through-passages;

wherein the device further comprises an aligning means for aligning the fastening member and the stem portion to thereby cause said fastening member to be positioned in a substantially orthogonal position with respect to said stem portion when said fastening member is attached to the bone;

wherein a female recess is formed in the male-tapered external portion of the fastening member, wherein the female recess is defined by a threaded sidewall for threadedly engaging the threaded portion of the fastener;

wherein the fastener is insertable through the second through-passages of the connecting member and into the first through-passages of the connecting member, such that the threaded portion of the

fastener is threadedly engageable with the sidewall defining the female-threaded recess of the fastening member, thereby holding said connecting member in a compression locked position upon the elongate support member.